project as approved by the financial institutions/banks whichever is less.

(ii) Project formulation assistance for the preparation of viable/ bankable projects for the development of wastelands in non-forest areas at the rate of 1 % of the firmed up cost of a project.

(c) The scheme has become operational from the current financial year and so far no proposal has been received.

Rejection of Ozone Fund

3242. SHRI KAMLA SINHA:
SHRI MOHAMMED AFZAL *alias* MEEM AFZAL:

Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that the proposal for indigenous capacity building of HFC-134 by one of the CSIR Laboratories has been rejected by Ozone Fund; and

(b) if so, what steps Government propose to take to see that such an important capacity building project does not face any hindrance due to paucity of foreign funds?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY, SPACE AND MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVENESH CHATURVEDI): (a) The proposal has been deferred pending the development of policy guidelines on production of substitutes taking into consideration strategies for the development of indigenous technologies and the utilization of imported technologies.

(b) Indian Institute of Chemical Technology, Hyderabad have initiated efforts to mobilise indigenous resources with a view to ensuring that the project does not suffer for want of foreign funds.

Collection/Analysis of Rain Rate Statistics

3243. SHRI G. Y. KRISHNAN: Will the PRIME MINISTER be pleased to state:

(a) whether Scientists have undertaken mapping or rain rates at various locations in the country for surmounting interference in critical terrestial and satellite communications;

(b) if so, what is the rain mapping technology evolved by them or borrowed from some other advanced countries; and

(c) in what manner it is proposed to collect and analyse rain rate statistics?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY, SPACE AND MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVENESH CHATURVEDI): (a) More than 100 years of rainfall data have been collected by India Meteorological Department (IMD), using self recording rain gauges with integration time of 20 to 30 minutes. These rainfaa from a countrywide observational network are recorded on a regular basis, analysed and archieved in a computerised Data Bank. As regards the interference effects of rain rates on terrestrial and satellite communication, recently a few organisations, like, Space Application Centre, Ahmedabad, National Physical Laboratory, New Delhi, have undertaken measurements at some selected places using fast response rain gauges with integration time of 10 seconds.

(b) Slow-response rain mapping technology is available in India since long. Fast response technology has also been developed and specific studies have been carried out.

(c) Such specific studies, attempted on experimental basis, are being continued and results analysed. Already, a few papers have been published using these analyses for future broadcasting and communication applications.

Collision on Jupiter

3244. SHRI BHUPINDER SINGH MANN: Will the PRIME MINISTER be pleased to state:

(a) what are the details of collision that took place on Jupiter recently and what are its effects on Jupiter and on Earth; and

(b) the names of Observatiories which

witnessed this phenomenon and observations thereof?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY, SPACE AND MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVENESH CHATURVEDI): (a) The 21 fragments of the Comet Shoemaker-Levy 9 started colliding with Jupiter in sequence from 00.56 hours (1ST) on July 17 and the final major fragment impacted at 13.11 hours on July 22, 1994. These astronomical events were powerful and caused visible effects on the Jovian atmospher such as change in the intensity of methane bands and emission of intense radiation from heated clouds of gas which mushroomed above the atmosphere. The event also left prominent changes on the visible appearance of the atmosphere of the planet. As per available information, no environmental effects are perceived on our earth.

(b) In India, the following observatories are involved in the programme of observations and analysis:

(i) Vainu Bappu Observatory, Kavalur, (Karnataka) of the Indian Institute of Astrophysics, (IIA) Bangalore

(ii) Kodaikanal Observatory of IIA.

(iii) Gauribidanur Observatory of IIA.

(iv) Japal Rangapur Observatory at Osmania University.

(v) Ooty Radio Telescope

(vi) Giant Meterwave Radio Telescope (GMRT) Pune

(vii) Uttar Pradesh State Observatory (UPSO), Nainital

The photographs obtained show the dark regions of crash sites on Jupiter. The Raman Research Institute, Bangalore also observed several fold increase in the microwave emission of Jupiter, lasting a few minutes after the impact of the Ecomponent.

The Other Institutions similarly involved include Physical Research Laboratory, Ahmedabad; National Physical Laboratory, New Delhi and Tata Institute of Fundamental Research, Bombay.

Seismic Study of Delhi

3245. SHRI RAMDAS AGARWAL:
SHRI SATISH AGARWAL:

Will the PRIME MINISTER be pleased to state:

(a) Whether it is a fact that Delhi falls in Seismic Zone 4 (four) where earthquake magnitude can range from 4 to 7 on the richter scale indicating the lowest/highest magnitude recorded till the end of July, 1994 for the last three years, indicating the areas susceptible to damage in the capital;

(b) whether Government have asked any Scientific Team to undertake study of seismicity and soil behaviour in Delhi with a view to identify zones vulnerable to earthquake damage as reported in the Hindustan Times dated 1st August, 1994;

(c) if so, whether such team will take into account similar type of studies undertaken by other foreign countries particularly in Asia;

(d) whether the proposed study is a first of its kind in India; and

(e) if so, what remedial steps Government have so far taken or propose to take to protect residential/critical buildings to avoid sudden loss and untimely casualties indicating by when the study Report is likely to be submitted to Government so that other states in the country may equally be benefited by its findings?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY, SPACE AND MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVENESH CHATURVEDI): (a) Yes, Sir, it is a fact that Delhi falls in seismic zone IV as per the Indian standard code, IS: 1893-1984. Delhi has witnessed small earthquakes of magnitude around 4 in the recent past. Earthquakes of magnitude 3.5 & 4 occurred respectively on 21.3.93 and 28.7.94. Historically also earthquakes of low to moderate intensity have occurred around Delhi. Analysis of the data has indicated that the seismic activity is mainly